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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,212	04/13/2004	James M. Walker	005427-0016	4648
20572	7590	02/24/2006	EXAMINER	
GODFREY & KAHN S.C. 780 NORTH WATER STREET MILWAUKEE, WI 53202			LAM, THANH	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/823,212	WALKER, JAMES M.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thanh Lam	2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0804</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, claims 1-19 in the reply filed on 1/12/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "limit the current to lower values at higher engine RPMs." as recited in 6, the "large wire gauge" as recited in claim 8, "power equipment and vehicles which requires battery charging or electrical power generation" and "connectors of the alternator" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Uemura et al. (US 2004/0090136).

Regarding claims 1,18, Uemura et al. disclose a permanent magnet charging system in which the output current can be limited by increasing the number of magnet pole pairs comprising: a rotor (1) with a plurality of permanent magnets (2) mounted to the inside surface of the rotor; a stator (3) mounted under the rotor, the stator including a central core with a plurality of poles extending radially outwardly from the periphery of the core, the poles each having a radially extending member (4) extending outwardly from the central core and an end member (poles teeth 4) located at the end of the

radially extending member; a plurality of windings (5) wound around the radially extending member of the stator, wherein a first winding (5, fig. 1) is wound around every third pole, a second winding (wound the same as first winding, see para. 0025) is wound around the next open poles and a third winding is wound around the last open poles; an air gap between the end members and the magnets to allow rotation of the rotor around the stator creating a magnetic field and inducing a current in the windings of the stator; and wherein each of the magnets have an arc length (see 2, fig. 1) that is approximately equal to the length of the end members of the poles 4, fig. 1).

Regarding claim 2, Uemura et al. disclose the magnets are circumferentially arranged and magnetized in the radial direction with alternating north (N of magnet 2) and south (S of magnet 2) polarities.

Regarding claim 3, Uemura et al. disclose the magnets are affixed to the inside surface of the rotor sidewall by an adhesive or other fastening means.

Regarding claim 4, Uemura et al. disclose the windings include three wires wound around the stator poles for a three phase charging system.

Regarding claim 5, Uemura et al. disclose the windings include a first winding wound around every third pole, a second winding wound around the next open poles and a third winding wound around the last open poles.

Regarding claim 6, Uemura et al. disclose the increase in the number of magnet poles increases the frequency of the changing magnetic field which helps to limit the current to lower values at higher engine RPMs.

Regarding claims 7, 10, Uemura et al. disclose the increase in the number of magnet poles (para. 0011) allows for fewer windings on the stator.

Regarding claim 8, Uemura et al. disclose the fewer windings on the stator allows for larger wire gauges to be used in the manufacture of the stator, helping to reduce temperatures.

Regarding claim 9, Uemura et al. disclose the fewer windings on the stator allow the stator to be manufactured at a lower cost.

Regarding claim 11, Uemura et al. disclose the increase in the number of magnet poles reduces peak currents in the stator.

Regarding claim 12, Uemura et al. disclose the reduced current prolongs the life of the connectors of the alternator.

Regarding claim 13, Uemura et al. disclose the increase in the number of magnet poles reduces the torque required to turn the rotor.

Regarding claim 14, Uemura et al. disclose the increase in the number of magnet poles results in lower operating temperatures of the alternator making the alternator more reliable.

Regarding claim 15, Uemura et al. disclose the increase in the number of magnet poles reduces the number of laminations of the stator when using rare earth magnets.

Regarding claim 16, Uemura et al. disclose the increase in the number of magnet poles can be done with all types of magnetic materials, including Ceramic, Neodymium, Samarium-cobalt and Alnico.

Regarding claim 17, Uemura et al. disclose the stator is made from a plurality of steel laminations.

Regarding claim 19, Uemura et al. disclose the charging system can be incorporated into a plurality of different power equipment and vehicles which requires battery charging or electrical power generation.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Admitted Prior Art figure 1, of the application. hereinafter 'APA

Regarding claims 1 and 18, APA disclose all the limitations of the claimed invention.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (571) 272-2026. The examiner can normally be reached on tu-th 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh Lam  
Primary Examiner  
Art Unit 2834

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